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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,163

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Kunihiro Fushimi

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KANESAKA BERNER AND PARTNERS LLP
1700 DIAGONAL RD
SUITE 310
ALEXANDRIA, VA 22314-2848

EXAMINER

YAGER, JAMES C

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,163	Applicant(s) FUSHIMI ET AL.	
	Examiner JAMES YAGER	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20060714 & 20080129</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I in the reply filed on 15 January 2009 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 7-10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 15 January 2009.

Claim Rejections - 35 USC § 112

3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "development glass" renders the claim indefinite because it is unclear what is meant by this or to what type of glass this is referring.

Regarding claim 2, the phrase "alternately contains" renders the claim indefinite because it is unclear what is meant by this phrase. Does this mean that as an alternative to the vapor deposition layers, the vessel may have two types of vapor deposition layers whose refractive

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indices differ from each other by 0.1 or more or does this mean that the vapor deposition layers comprise two types of vapor deposition layers whose refractive indices differ from each other by 0.1 or more in an alternating configuration? For purposes of this office action, it will be interpreted as the vapor deposition layers comprise two types of vapor deposition layers whose refractive indices differ from each other by 0.1 or more in an alternating configuration.

Regarding claim 3, the phrase “as a lower layer” renders the claim indefinite, because it is unclear what is meant by this phrase. Does this refer to the position of the layer in the film? If so, where must the layer be positioned to be considered a “lower” layer? For purposes of this office action, it will be interpreted as meaning that the layer is positioned between the glass and the other layers of the multilayer film.

Regarding claim 4, the phrase “alternately contains” renders the claim indefinite because it is unclear what is meant by this phrase. Does this mean that as an alternative to the vapor deposition layers, the vessel may have two or more silica and titanium layers or does this mean that the vapor deposition layers comprise silica and titanium layers in an alternating configuration or that in addition to the vapor deposition layers, silica and titanium layers are present? For purposes of this office action, it will be interpreted as the vapor deposition layers comprise silica and titanium layers in an alternating configuration.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishizawa et al. (US 6,359,380).

Regarding claims 1 and 2, discloses a color cathode ray tube having a phosphor layer in different colors (i.e. a multicolor development glass vessel) (C4/L30-35) comprising an anti-reflective and antistatic film composed of two layers of which the first layer has a refractive index of about 2 and the second layer has a refractive index of about 1.47 (i.e. comprising a multilayer film composed of multiple layers whose refractive indices differ from each other, directly or indirectly provided on an external surface or internal surface, or either one thereof, of the glass vessel; wherein the multilayer film alternatively contains two types of vapor deposition layers whose refractive indices differ from each other by 0.1 or more) (C2/L30-37).

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Spiro et al. (US 6,534,903).

Regarding claims 1-5, Spiro discloses a glass reflector for a lamp (i.e. a glass vessel) (C2/L25-30) comprising vapor deposited coatings (i.e. comprising a multilayer film composed of multiple vapor deposition layers, directly or indirectly provided on an external or internal surface, or either one thereof, of the glass vessel) (C3/L55-65) comprising alternating layers of titania and silica (i.e. whose refractive indices differ from each other; wherein the multilayer film alternately contains two types of vapor deposition layers whose refractive indices differ from each other by 0.1 or more; wherein the two types of the vapor deposition layers alternately contains at least two or more of silica layers and titanium layers) (C8/L1-5), wherein the

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thicknesses of each layer is 20 to 10,000 Angstroms (2-1000nm) (i.e. clearly overlapping wherein the multiple vapor deposition layers have their respective thicknesses in a range of 50 to 3,000nm) (C5/L35-45)

Given that there may be between two and one hundred layers (C5/L25-31), it is the examiners position that the innermost silica layer may be the lower layer of the multilayer film (i.e. further comprising at least one layer selected from a silica layer as a lower layer of the multilayer film).

Given that the reflector of Spiro is identical in structure and composition to the instantly claimed vessel, it is the examiner's position that the reflector of Spiro will inherently be a multicolor development vessel.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spiro et al. (US 6,534,903) in view of Kimura et al. (US 6,228,480).

Regarding claim 6, Spiro discloses all of the claim limitations as set forth above. Spiro does not disclose a polysiloxane-based coating film is provided between the external surface or internal surface of the glass vessel and the multiple vapor deposition layers.

Kimura discloses a glass substrate having a metal oxide coating and an adhesive layer between the metal oxide and the glass comprising polysiloxane (i.e. a polysiloxane-based coating film is provided between the external or internal surface of the glass vessel and the multiple vapor deposition layers) (abstract, C4/L5-10). Kimura further discloses that when the adhesive layer comprises polysiloxane, the structure exhibits improved adhesive property and durability (C4/L65-C5/L5).

Spiro and Kimura are analogous art because they both teach about metal oxide layers adhered to glass substrates. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adhesive layer comprising polysiloxane

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into the reflector of Spiro to provide a reflector having improved adhesive property and durability.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishizawa et al. (US 6,359,380) in view of Kimura et al. (US 6,228,480).

Regarding claim 6, Nishizawa discloses all of the claim limitations as set forth above. Nishizawa does not disclose a polysiloxane-based coating film is provided between the external surface or internal surface of the glass vessel and the multiple vapor deposition layers.

Kimura discloses a glass substrate having a metal oxide coating and an adhesive layer between the metal oxide and the glass comprising polysiloxane (i.e. a polysiloxane-based coating film is provided between the external or internal surface of the glass vessel and the multiple vapor deposition layers) (abstract, C4/L5-10). Kimura further discloses that when the adhesive layer comprises polysiloxane, the structure exhibits improved adhesive property and durability (C4/L65-C5/L5).

Nishizawa and Kimura are analogous art because they both teach about metal oxide layers adhered to glass substrates. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the adhesive layer comprising polysiloxane into the tube of Nishizawa to provide a tube having improved adhesive property and durability.

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Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES YAGER whose telephone number is (571)270-3880.

The examiner can normally be reached on Mon - Fri, 7:30am-5pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY 4/6/09

/Rena L. Dye/
Supervisory Patent Examiner, Art Unit 1794